

DERWENT-ACC-NO: 1988-011448
DERWENT-WEEK: 198802
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TITLE: Resin compsn. used for prepreg prepn. - contg.
cyanate ester,
bis-maleimide, polyether sulphone and epoxy! resin contg.
bisphenol f or a

PATENT-ASSIGNEE: TORAY IND INC[TORA]

PRIORITY-DATA: 1986JP-0117532 (May 23, 1986)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
PAGES	MAIN-IPC	
JP 62275123A	November 30, 1987	N/A
007	N/A	

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
JP62275123A	N/A	1986JP-0117532
May 23, 1986		

INT-CL_(IPC): C08G059/40; C08J005/24 ; C08L063/00

ABSTRACTED-PUB-NO: JP62275123A

BASIC-ABSTRACT: A resin compsn. for preparing prepreg with reinforcing fibre comprises (A) a cyanate ester, (B) bismaleimide in amts. of (A) + (B) = 10-90 wt.% and (A)/(B) = 70/30 - 100/0, (C) 5-30 wt.% of polyether sulphone and (D) 10-90 wt.% of epoxy resin comprising bisphenol F- or A-type. Pref. (A) is of formula R(O-CN)_m (I): (R is aromatic gp. and m is 2 -5) (e.g. 1,3- or 1,4-dicyanatobenzene, 1,3,5-tricyanatophthalene, 1,3,6-tricyanatophthalene, 4,4-dicyanatobiphenyl, bis(4-cyanatophenyl)-b is (4-cyanato phenyl) or 2,2-bis(3,5-dichloro-4-cyanatophenyl)- propane, etc.). (B) is prepd. by reacting an aromatic or aliphatic amine with maleic anhydride

and dehydrating and cyclising the formed maleinamidate salt. It is pref.
bis(4-maleimide-phenyl)methane. (C) comprises repeating unit of formula (II).
(D) comprises epoxy resin of bisphenol-F or -A-type and opt. epoxy resin or phenol novolak-, cresol novolak- or tetraglycidylaminodiphenyl methane-type, triglycidyl-p- or -m-aminophenyl etc. for improving the adhesion with the reinforcing fibre. The compsn. is prepd. by pulverising polyether sulphone, dissolving it in epoxy resin heated at 120-160 deg. C, cooling the soln. to lower than 100 deg. C and mixing the soln. with a mixt. of cyanate ester and bismaleimide prepolymerised at 80-140 deg. C in the presence of pulverised polyether sulphone dissolved in the epoxy resin and mixing the cooled prepolymer with the residual amt. of epoxy resin. The compsn. is hardened opt. in the presence of a hardening catalyst (e.g. imidazole, phenol, Zn octylate, dicumyl peroxide, acid anhydride or azo cpd.). The reinforcing fibre is pref. of carbon, aramide, alumina, Si- or W-carbide, or boron.

USE/ADVANTAGE - The prepreg, has high storage stability and provides hardened prod. with high resistance to heat, water and impact.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS:

RESIN COMPOSITION PREPREG PREPARATION CONTAIN CYANATE ESTER
DI MALEIMIDE
POLYETHER SULPHONE POLYEPOXIDE RESIN CONTAIN BISPHENOL

DERWENT-CLASS: A26 A32

CPI-CODES: A05-A02; A05-H07; A05-J05; A05-J06; A07-A03;
A07-A03B; A07-A03C;
A08-R01;

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0476U; 0868U ; 1193U ;
1247U ; 1544U ; 1668U

; 5023U ; 5086U

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0011 0016 0020 0034 0035 0203 0205 0218 0222

0069 0171 0183 0226

1218 1279 1282 3183 3184 1283 1309 1311 1357 1359 1373 3079

3083 1601 1920 2002

2020 2198 2212 2213 2215 2219 2285 2287 2288 2293 2299 2300

2301 2302 2307 2329

2330 2491 2493 2542 3251 2572 2600 2617 2628 3252 3255

Multipunch Codes: 014 02& 040 05- 06- 08& 08- 10- 106 134

140 141 147 15- 151

153 163 199 20- 213 214 215 216 220 221 222 225 226 229 23&

231 240 265 266 267

273 299 303 308 309 311 331 335 336 341 359 368 392 393 400

427 46& 473 479 48-

53& 532 533 535 536 54& 540 541 546 55& 551 556 560 566 57&

597 600 684 720 722

723 726

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1988-005167